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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/806,304	03/29/2001	Alain Brochez	BROC3001/JEK	6723

7590 10/27/2004  
Bacon & Thomas  
4th Floor  
625 Slaters Lane  
Alexandria, VA 22314

EXAMINER
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FLANDRO, RYAN M

ART UNIT	PAPER NUMBER
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3679

DATE MAILED: 10/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/806,304

Applicant(s)

BROCHEZ, ALAIN

Examiner

Ryan M Flandro

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 June 2004 and 23 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 29-36, 39, 41, 44-50 and 53-59 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 36, 39 and 53-55 is/are allowed.
- 6) ☒ Claim(s) 29-35, 41, 44-48 and 56-58 is/are rejected.
- 7) ☒ Claim(s) 49, 50 and 59 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

#### ***Continued Examination Under 37 CFR 1.114***

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/23/04 has been entered.

#### ***Specification***

3. The substitute specification filed 1/31/03 has been entered because it now conforms to 37 CFR 1.125(b) and (c); i.e., the statement as to a lack of new matter under 37 CFR 1.125(b) is now included (see Applicant response dated 6/23/04, page 16).

#### ***Claim Objections***

4. Applicant's response filed 6/23/04 has overcome each objection previously set forth in the Office action dated 3/23/04.
5. Claims 31-33 and 45, as amended, are objected to because of the following informalities:

- a. Claim 31. In line 7, the word "of" should be removed; in line 11, the word "pieces" should be changed to --parts-- for consistency.
- b. Claim 32, as amended. In line 4, recitation of "the at least one locking element" does not have proper antecedent basis in claims 31 or 32 due to the deletion of claim language and a change in dependency. Claim 33 perpetuates the inconsistency.
- c. Claim 45. In line 7, recitation of "the one end" should be changed to --the connecting end-- for consistency; in line 12, the word "part" should be changed to --piece-- for consistency.
- d. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 33, 56 and 57 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a. Claim 33. Specifically, recitation that the "contact surface of the at least one locking element is *substantially detached* from the *body of the corner piece*" is indefinite in that (1) the term "substantially detached" implies that the contact surface is not at all connected to the corner piece and (2) there is nothing in the current claims or within the

written disclosure that distinctly sets forth what constitutes “the body of the corner piece”.

b. Claim 56. The recitation set forth in the last 6 lines of the claim is very unclear and confusing, so much so as to make the claim indefinite. The Examiner cannot determine exactly what structure the limitations in this portion of the claim are intended to define.

Claim 57 depends therefrom.

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claim 44 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Recitation in claim 44 that the corner piece and the attachment channels define mutually non-parallel surfaces with the exception of the lip projection region is not accurate. In fact, other surfaces exist on the insert parts of the instant invention (such as the inner surfaces which contact the inner surfaces of the attachment channels) which are parallel. This limitation is, thus, not supported by the specification.

***Claim Rejections - 35 USC § 102***

10. Claim 30 is rejected under 35 U.S.C. 102(b) as being anticipated by Olson (US 2,792,918). Olson clearly shows and discloses each and every limitation recited in claim 30, especially including at least one locking element 19 having at least one notch (cut-away portion under projection 19) disposed along a surface thereof, said at least one locking element 19 arranged to abut a locking means 16 defined along an outer surface 11 of an attachment channel 2 or 3 (see figure 4; column 2).

11. Claims 31, 32 and 41 are rejected under 35 U.S.C. 102(b) as being anticipated by Hagerty et al (US 2,861,659) (Hagerty).

a. Claim 31. Hagerty clearly shows and discloses a corner joint for joining two frame side members 10,11 having attachment channels 18 and mitered end portions, said joint including at least one corner piece 20 having two insert parts 21,22 joined at connecting ends and positioned relative to one another at a predetermined angle, each insert part 21,22 configured to be received by the mitered end portions of a respective one of the attachment channels 18 of the side members 10,11; wherein the corner joint is provided with locking means 25,32 comprising of upset material parts 32 in the shape of a lip projection made by means of slantingly press-in parts 32 of the side members 10,11 which cooperate with notches 25 defined on the corner piece 20; wherein the insert [parts] 21,22 include at least one notch 25, said notches 25 comprising a triangular shape defined by one side 27 against which the lip projection 32 is positioned is longer than another side 26 over which a free end of the lip projection 32 is pressed-in; and [the

notches **25** further comprising] a shape of a right triangle, the relation between said one **27** side and the other side **26** is variable based on the compression characteristics of the material of the side members **10,11**; wherein the side **26** of the notches **25** over which the free end of the lip projection **32** is pressed-in, on the place where the free end of the lip projection **32** makes contact with the one side **27** extends *substantially* perpendicular to the longitudinal direction of the lip projection **32**(see figures 1-6; columns 1-2).

b. Claim 32. Hagerty further shows and discloses said lip projection **32** includes a contact surface disposed at one end thereof which is arranged to cooperate with a contact side **27** of the insert part **21,22**; wherein at least one locking element **26** includes a contact surface geometrically configured to substantially contact the entire length of the lip projection (see figures 1-6; columns 1-2).

c. Claim 41. Hagerty further shows and discloses said insert parts **21,22** each include a resilient element connected at one end to one end of a resilient element of the corresponding insert part **21,22** (see figures 1-6; columns 1-2).

12. Claims 45 and 46 are rejected under 35 U.S.C. 102(b) as being anticipated by Ekstein (US 3,797,194).

a. Claim 45. Ekstein clearly shows and discloses a corner joint for joining two frame side members **12,14** having attachment channels and mitered end portions, said joint including at least one corner piece **16** having two insert parts **74,76** joined at connecting ends and positioned relative to one another at a predetermined angle, each insert part **74,76** configured to be received by the mitered end portions of a respective one of the

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attachment channels of the side members **12,14**; wherein each insert part **74,76** includes a leg **101** extending from the [connecting] end of the insert part **74,76** and arranged to extend into an attachment channel along an inner surface thereof, said insert part **74,76** including a locking part **84** arranged to lock with an outer surface **52** of the attachment channel (via elements **108 or 110**); and wherein a clearance (see clearance near **22**) is defined between the outer surface **22 or 52** of the attachment channel and the insert part **74,76** when the corner [piece] **10** is inserted into at least one attachment channel, the clearance generally extending from the locking part **108 or 110** to at least the connecting end of the insert parts **74,76** (see figures 1 and 2).

b. Claim 46. Ekstein clearly shows and discloses a corner joint for joining two frame side members **12,14** having attachment channels and mitered end portions, said joint including at least one corner piece **16** having two insert parts **74,76** joined at connecting ends and positioned relative to one another at a predetermined angle, each insert part **74,76** configured to be received by the mitered end portions of a respective one of the attachment channels of the side members **12,14**; wherein the corner piece **10** is provided with positioning elements **100 or 79 or 179 or 101** arranged to guide the insert parts **74,76** into the attachment channels when positioned therein; and wherein the positioning elements **100 or 79 or 179 or 101** include support and guiding elements **78 or 178 or 89 or 189** provided on the corner [piece] **10** in the shape of a little leg having elastically bendable flaps **79 or 179 or 90 or 190** arranged to cooperate with the outer surface of the attachment channels (see figures 1-3).



13. Claim 58 is rejected under 35 U.S.C. 102(b) as being anticipated by Cobb et al (US 5,621,994) (Cobb). Cobb clearly shows and discloses a corner joint for joining two frame side members **15a,15b** having attachment channels **20** and mitered end portions **43a,43b**, said joint including at least one corner piece **32** having two insert parts **34,35** joined at connecting ends **51,62** and positioned relative to each other at a predetermined angle, each insert part **34,35** configured to be received by the mitered end portions **43a,43b** of a respective one of the attachment channels **20** of the side members **15a,15b**; wherein the connecting ends **51,62** of the insert parts **34,35** are connected with a hinge **36**, said hinge **36** having a rotational axis positioned near inner walls of said attachment channels **20**; wherein each insert part **34,35** includes a hook-shaped protrusion defined at the connecting end **51,62** thereof, the hook-shaped protrusion arranged to pivotably connect to a hook-shaped protrusion of a corresponding one of the insert parts **34,35** (see figures 2-6; columns 3-5). The Examiner has interpreted the term "hook-shaped" very broadly because a hook can take many different shapes and forms depending on the particular function it is intended to serve.

***Claim Rejections - 35 USC § 103***

14. Claims 29, 44, 47 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Olson (US 2,792,918) in view of Ekstein (US 3,797,194).

- a. Claim 29. Olson clearly shows and discloses each limitation recited in claim 29, including an end portion geometrically configured in the shape of a triangle having an apex directed along a longitudinal axis of an attachment channel, but lacks disclosure of the corner piece **15** including a plurality of deformable positioning elements extending

generally from a region where the connecting ends of the insert parts join. Ekstein, however, teaches a corner piece **10** including a plurality of deformable positioning elements **78,100,178** extending generally from a region where the connecting ends of two insert parts **74,76** join (see figures 1-2; columns 2-3). Ekstein explicitly includes such elements to help align and secure the corner piece **10** (see column 3 lines 19-20).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Olson to include deformable positioning elements to help align and secure the corner piece in the joint as taught by Ekstein.

b. Claim 44, *as best understood*. Olson further shows and discloses that the corner piece **15** and attachment channels **2,3** define mutually non-parallel surfaces with the exception of the lip projection region **16,19** (which is at least parallel at some point during pressing-in of the lip projection **16**) (see figure 4).

c. Claim 47. Olson further shows and discloses the corner piece **15** including a clearance generally defined at an inside corner where the insert parts connect and having a hook-shaped profile (see figures 4 and 6). The L-shaped clearance at the inner corner of the corner piece **15** has been interpreted to fall within the meaning of a hook-shaped profile.

d. Claim 48. Olson further shows and discloses that the insert parts connect to form a unitary corner piece **15** (see figures 4 and 6).

15. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hagerty, as applied above, in view of Borys (US 4,651,482). Hagerty lacks disclosure of a filling compound

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being provided near or at the lip projection 32. Borys, however, teaches two insert parts 20,22 as well as a filling compound 16 being provided in the attachment channel in order to seal any gaps by which ambient moisture could enter (see figures 1-3; column 2 lines 10-37; column 2 line 63 – column 4 line 53). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made modify the corner joint of Hagerty by providing a filler in the attachment channels (and, thus, at or near the lip projection 32) in order to provide a seal against moisture as taught by Borys.

16. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Olson and Ekstein, as applied above, further in view of Borys. The combination of Olson and Ekstein includes a triangular shape on each of the insert parts 15 (see end portion of each insert part in Olson), but lacks disclosure of a filling compound being provided in the attachment channel. Borys, however, teaches two insert parts 20,22 and a filling compound 16 being provided in the attachment channel in order to seal any gaps by which ambient moisture could enter (see figures 1-3; column 2 lines 10-37; column 2 line 63 – column 4 line 53). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made modify the corner joint of the combination of Olson and Ekstein by providing a filler in the attachment channels in order to provide a seal against moisture as taught by Borys.

### *Response to Arguments*

17. Applicant's arguments filed 6/23/04 have been fully considered but they are not persuasive. With regard to Applicant's arguments against the application of Hagerty in the

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rejection of claim 31, the rejection above sets forth the Examiner's position as to how the Hagerty structure reads on the claimed limitations. Notches 25 and lip projection 32 are believed to substantially read on each limitation as currently recited.

The remaining arguments have been rendered moot by the new grounds of rejection set forth above.

*Allowable Subject Matter*

18. The indicated allowability of claims 29, 45, and 46 is withdrawn in view of the newly applied reference(s). Rejections based on the newly cited reference(s) are set forth above.

19. Claims 36, 39, 53, 54, 55 are allowed.

20. Claims 49, 50 and 59 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

21. Claims 56 and 57 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

22. Claim 33 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

*Conclusion*

23. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents are cited to further show the state of the art with respect to corner inserts for miter joints:

U.S. Patent 6,108,997 to Blais et al.

U.S. Patent 5,564,758 to Tiberio

U.S. Patent 5,154,034 to Stanek

U.S. Patent 4,637,752 to Centa

U.S. Patent 4,452,138 to Bublely et al.

U.S. Patent 3,782,054 to Goss, Jr.

U.S. Patent 3,677,433 to Collins

U.S. Patent 3,627,359 to Paul

U.S. Patent 3,606,419 to Virkler et al.

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan M Flandro whose telephone number is (703) 305-6952.

The examiner can normally be reached on 9:00am- 6:00pm Mon-Fri.

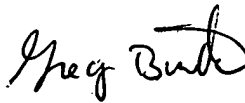
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (703) 308-2686. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
RMF

October 21, 2004

  
GREGORY J. BINDA  
PRIMARY EXAMINER